

## Ultramid® B3WM8 BK00102

PA6-MD40

BASF

Ultramid® B3WM8 (8260 HS) BK-102 is a heat stabilized, pigmented black, 40% mineral reinforced PA6 injection molding resin. It possesses high stiffness, dimensional stability and heat resistance combined with excellent processability including low warp and resistance to sink-mark formation. It maintains its inherent chemical resistance to greases, oils and hydrocarbons.

Ultramid® 8260 HS BK-102 is generally recommended for applications such as marine hardware, brackets, fittings, bobbins, office furniture, appliance components, and power tool housings.

| Mechanical Properties                   | dry / cond  | Unit              | Test Standard |
|-----------------------------------------|-------------|-------------------|---------------|
| <b>ISO Data</b>                         |             |                   |               |
| Tensile Modulus                         | 6400 / 3800 | MPa               | ISO 527       |
| Stress at Break                         | 85 / 60     | MPa               | ISO 527       |
| Strain at Break                         | 10 / 30     | %                 | ISO 527       |
| Impact Strength (Charpy), +23°C         | 130 / -     | kJ/m <sup>2</sup> | ISO 179/1eU   |
| Notched Impact Strength (Charpy), +23°C | 3 / -       | kJ/m <sup>2</sup> | ISO 179/1eA   |

| Thermal Properties                        | dry / cond | Unit  | Test Standard  |
|-------------------------------------------|------------|-------|----------------|
| <b>ISO Data</b>                           |            |       |                |
| Melting Temperature (10°C/min)            | 220 / *    | °C    | ISO 11357-1/-3 |
| Temp. of deflection under load (1.80 MPa) | 90 / *     | °C    | ISO 75-1/-2    |
| Temp. of deflection under load (0.45 MPa) | 190 / *    | °C    | ISO 75-1/-2    |
| Burning Behav. at thickness h             | HB / *     | class | UL 94          |
| Thickness tested                          | 3.0 / *    | mm    | -              |
| UL recognition                            | yes / *    | -     | -              |

| Electrical Properties | dry / cond | Unit  | Test Standard |
|-----------------------|------------|-------|---------------|
| <b>ISO Data</b>       |            |       |               |
| Volume Resistivity    | >1E13 / -  | Ohm*m | IEC 62631-3-1 |

| Other Properties    | dry / cond | Unit              | Test Standard  |
|---------------------|------------|-------------------|----------------|
| <b>ISO Data</b>     |            |                   |                |
| Water Absorption    | 5.7 / *    | %                 | Sim. to ISO 62 |
| Humidity absorption | 1.6 / *    | %                 | Sim. to ISO 62 |
| Density             | 1490 / -   | kg/m <sup>3</sup> | ISO 1183       |

| Test specimen production            | Value | Unit | Test Standard |
|-------------------------------------|-------|------|---------------|
| <b>ISO Data</b>                     |       |      |               |
| Injection Molding, melt temperature | 270   | °C   | ISO 294       |
| Injection Molding, mold temperature | 80    | °C   | ISO 294       |

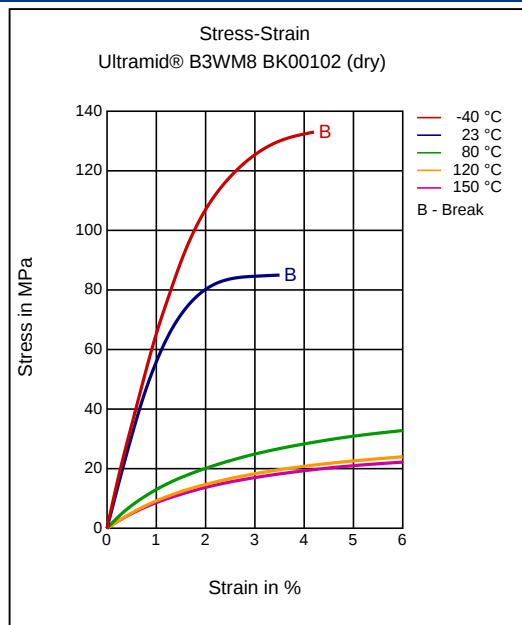
| Processing Recommendation Injection Molding | Value     | Unit | Test Standard |
|---------------------------------------------|-----------|------|---------------|
| Pre-drying - Temperature                    | 80        | °C   | -             |
| Processing humidity                         | ≤0.2      | %    | -             |
| Melt temperature                            | 240 - 280 | °C   | -             |
| Mold temperature                            | 80 - 95   | °C   | -             |

# Ultramid® B3WM8 BK00102 PA6-MD40

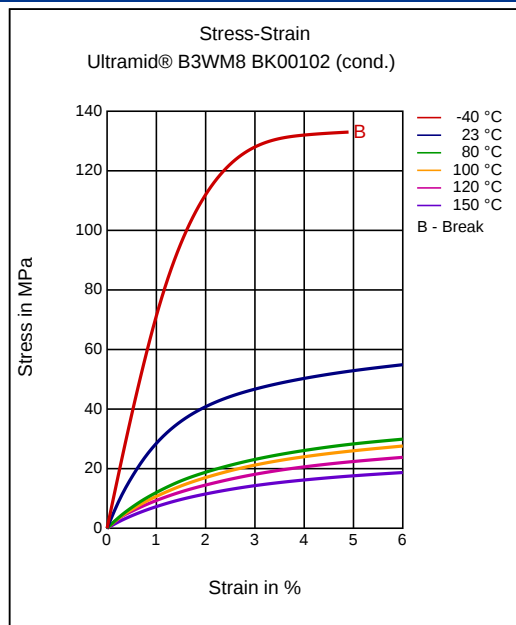
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## Diagrams

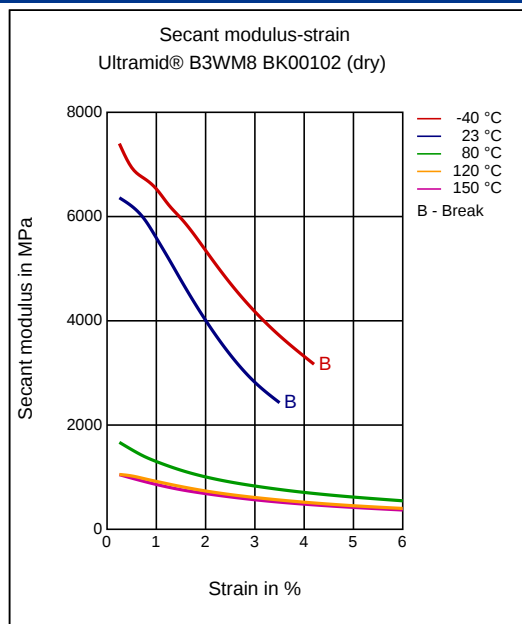
### Stress-strain



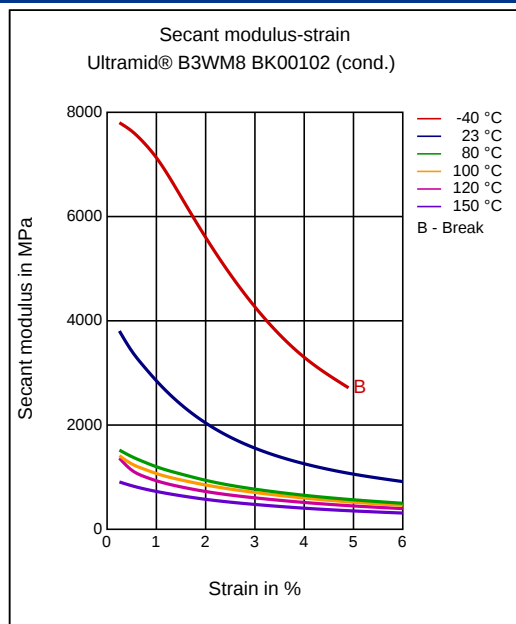
### Stress-strain



### Secant modulus-strain



### Secant modulus-strain



## Characteristics

### Processing

Injection Molding

### Delivery form

Pellets, Black

### Injection Molding

#### PROCESSING

injection molding, Melt temperature, range: 270 - 295 °C

injection molding, Melt temperature, recommended: 260 °C

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injection molding, Mold temperature, range: 80 - 95 °C  
injection molding, Mold temperature, recommended: 80 °C  
injection molding, Dwell time, thermoplastics: 10 min

### PREPROCESSING

Max. Water content: 0.2%

Product is supplied in sealed containers and drying prior to molding is not required. If drying becomes necessary, a dehumidifying or desiccant dryer operating at 80 °C (176 °F) is recommended. Drying time is dependent on moisture level.

Further information concerning safe handling procedures can be obtained from the Material Safety Data Sheet. Alternatively, please contact your BASF representative.

### PROCESSING

Melt Temperature 240-280 °C (464-536 °F)

Mold Temperature 80-95 °C (176-203 °F)

Injection and Packing Pressure 35-125 bar (500-1500 psi)

A mold temperature of 80-95 °C (176-203 °F) is recommended, but temperatures of as low as 10 °C (50 °F) can be used where applicable.

Injection pressure controls the filling of the part and should be applied for 90% of ram travel. Packing pressure affects the final part and can be used effectively in controlling sink marks and shrinkage. It should be applied and maintained until the gate area is completely frozen off.

Fast fill rates are recommended to insure uniform melt delivery to the cavity and prevent premature freezing.

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